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## THE ROMANIC VOWEL-SYSTEM

The early history of Romanic speech was divided into three periods, characterized by the treatment of stressed vowels other than *a*. In the first period there were only slight differences of quality between the long and the short sounds of *e*, *i*, *o*, *u*. Sardinian reflects this primitive condition. In the second period the palatal vowels developed greater qualitative differences, dependent on quantity; from this basis are derived Rumanian *ie* < *e*, *e* < *ē*, *e* < *ĩ*, *i* < *ī*, beside *o* < *ō*, *o* < *ō*, *u* < *ũ*, *u* < *ū*. In the third period the velar vowels underwent changes parallel with the second-period development of palatal vowels: thus Italian generally treats *ō* and *ũ* alike.

It is commonly but wrongly held that Italian and western Romanic represent the third-period vowel-system alone. They show many traces of earlier conditions, and their history cannot be understood if we ignore this fact. The evidence of Sardinian and Rumanian is not isolated: in the other languages palatal-influence often formed close *i* directly from *ĩ*, and close *u* directly from *ũ*. Close *e* and close *o* were not subject to such influence in western Romanic, so that we usually have a means of testing the formation of *i* and *u*. In order to explain the consonant-developments involved, a few special symbols must be used: *ŋ* = English final *ng*; *ñ* as in Spanish; *ʒ* = Bohemian *d'*; *κ* = Bohemian *t'*; *λ* = Portuguese *lh*; *ð* = English voiced *th*.

### PORTUGUESE EVIDENCE

In Portuguese, as in the other western Romanic tongues, we must distinguish between palatal-influence and harmonic change. The law of harmony, with regard to stressed vowels, is this: in the third period, after the general change of *ũ* to *o*, palatal vowels became *i* and velar vowels became *u*, if they were followed by (but not in contact with) close *i* or close *u*. The vowel *a* was neutral, neither palatal nor velar, and was therefore free from harmonic influence. Stressless hiatus-*i* and hiatus-*u* regularly became close, without regard to the original quality. Examples are *fiz* < *fēcĩ*, *vendima* < *\*vendimia*

< *windēmia*, *cubro* < \**cubrio* < \**cōprio* (for *cooperio*); *pude* < *pudi* < \**podi* < \**poudi* < *potuī*, besides *pôde* < \**poudet* < *potuit*, with contraction of *ou* to close *o* before *au* became *ou*. From *tíbio* < \**tebio* < \**tebeo* < \**tebedo* < *tepidu* it is clear that the harmonic principle was active at a rather late time, after the loss of  $\delta$  between vowels. We may therefore assume \**dovio* < *dubiu*, \**rovio* < *rubeu* (or *rubidu*), \**vedrio* < *uitreu*, \**veduau* < *uidua*, parallel with *gota* < *gutta*, *verde* < *uiride*. Afterward, when *u* was developed in \**cubrio* and *i* in \**windimia*, similar changes took place in \**dovio* > \**duvio* (whence *duvidar* instead of \**dovedar* < *dubitāre*), \**rovio* > \**ruvio* > *ruivo*, \**vedrio* > \**vidrio* > *vidro*, \**vedua* > \**vidua* > \**viuda* > *viuva*.

The foregoing theory of  $i < e < i$  and  $u < o < u$  is helped out by various words that have kept *e* or *o*. In *atrevo* < *attribuo*, *coso* < *consuo*, *poço* < *puteu*, *vezo* < *uitiu*, the hiatus-vowels were lost too early to affect the stressed vowels. In *nédio* < *nitidu*, the influence of *neto* < *nitidu* seems to have protected the *e*; Galician has normal *nidio*. If *lenga-lenga*, "long speech," is connected with *língua* < \**lengua* < *lingua*, its *e* can be explained by an early loss of *u*. The *e* of *égua* < *equa* may be due to normal *e* in a lost \**ego* < *equu*. In *dei* < *dedī*, *agoiro* < *auguriu*, *goiva* < *gubia*, *marroio* < *marrubiu*, *e* and *o* were kept because they were in contact with *i* before the principle of harmony was active. Such words show the need of distinguishing contact-change from harmonic change. By contact the palatals made open vowels close, but left close *e* and close *o* unmodified. By harmonic influence, after open *i* and open *u* were lost, close *i* was developed from close *e* (representing *ae*, *ě*, *ē*, *ǣ*), and close *u* from close *o* (representing *ō*, *ō̄*, *ǔ*). Harmony could cause double changes, from open *e* and *o* through close *e* and *o* to *i* and *u*, whereas palatal-influence caused only single vowel-changes.

In the first period of Portuguese,  $\eta g$  became  $\tilde{n}g$  before a palatal vowel; by assimilation  $\eta l$  was changed to  $\tilde{n}l$ , and  $\eta y$  to  $\tilde{n}\tilde{n}$ . These  $\tilde{n}$ -formations produced  $i < \tilde{i}$  and  $u < \tilde{u}$ . Examples are *cinge* < *cingit*, *tinge* < *tingit*, *junge* < *iungit*, *cilha* < *cin(gu)la*, *tinha* < *tinea*, *cunha* < \**cunea*. In *cilha* < \**kiñla* < \**kiñla*, the nasal was assimilated as in Italian *porre* < *pōnere*. The normal development of  $\eta gl$  was through  $\tilde{n}gl$  (in the second period) to  $\tilde{n}\tilde{n}$ , but by an early dissimilation, before *k* became an affricate, \**kiñgla* changed to \**kiñla*. Similar elimina-

tions are seen in *boi* for \**bove* < *boue*, *falar* for \**favlar* < *fābulāre*, *proa* < *prōra*.

The *o* of *cegonha* < *cicōnia* shows that *u* in *cunha* was developed directly from *ũ*, not by way of *o*. The apparently discordant *testemunho* is an early book-word, with *-unho* < \**-unio* < *-onio* corresponding to *ruivo* < \**ruvio* < \**rovio*. In *cegonha* and *vergonha* < *uerecundia* (a later development explained below), weak *i* did not affect the stressed vowels; evidently it was lost before \**rovio* became \**ruvio*. The sound *ñ* was formed in *cegonha* at the same time as in *tinha* and *cunha*. Therefore these two words lost weak *i* before the harmonic law was active, and their close vowels must be considered contact-developments. Thus the formation of *tinha* < *tinea* was direct, and entirely different from that of *vidro* < \**vedrio* < *uitreu*.

In the first period *g* changed to *ɣ* before a palatal vowel. In the second period, after close *i* was established in the derivatives of *cingit* and *tinea*, and after open *i* had become close *e*, the nasal-group *ɲn* (*gn* in Latin spelling) was changed to *ññ* by assimilation, likewise *ɲl* to *ñʎ* (whence later *ññ* and *ñ*); intervocalic *ɣ* and *ɣy* became *y* or *yy*. Before these palatals *ũ* made close *u*, as before *ñ* in the first period; but *ĩ* made *e* in accord with *e* < *ē* under the same conditions. Examples are *lenho* < *lignu*, *senha* < *signa*, *punho* < *pugnu*, *cenho* < *cingulu*, *senhos* < *singulos*, *unha* < *ungula*, *correia* < *corrigia*, *dedo* < *digitu*, *fuja* < *fugiat*. The *o* of *foge*, for \**fuge* or \**fui* < *fugit* (compare *rei* < *rēge*), is presumably analogic, like open *o* in *córre* beside normal close *o* in *côrra* < *currat*.

We must assign to the third period palatal-developments that accompany *o* < *u*. In cases differing from those already mentioned, we find a late formation of *ñ*, which left close *e* and close *o* unchanged: *vence* < \**veñket* < *uincit*, *onça* < \**oñkya* < *uncia*, *troncho* < \**troñklo* < *trunculu*, *conha*<sup>1</sup> < *calumnia*, *vergonha* < *uerecundia*. From *cinge* beside *vence* and *unha* beside *troncho*, it is clear that *κ* < *k* was later than *ɣ* < *g* under similar conditions. The other words lost *i* before the harmonic law was active. The group *mñ* kept *m* until after *gutta* became *gota* (or \**gotta*); then *m* was assimilated, in accord with *sono* < *somnu*. Another development was dissimilative, like *alma* < *anima*: *mñ* changed to *my*, after \**rovio* had become \**ruvio*, giving the variant *coomia* < *coima*.

<sup>1</sup> *Revista lusitana*, III, 265.

## SPANISH EVIDENCE

Spanish and Portuguese seem to have shared the harmonic law at first; compare Span. *hice*, *vendimia*, *cupro*, *pude*, *tibio*, *dudar*, *rubio*, *vidrio*, *viuda*. But its action was weaker in Spanish, which has *lengua* and *recio* beside Port. *língua* and *rijo* < \**rezio* < \**ricidu* (*rigidu* modified by *flaccidu*). These *e*-forms corroborate the theory of *i* < *e* < *i* explained above; so too does *vebda*, a variant of *viuda*. Evidently *viuda* corresponds to Port. *viuva*, with *δ* kept as in *nido* beside Port. *ninho* < \**nio* < *nīdu*; the other form represents \**veðva*, with *v* added as in Italian *vedova*. Apparently *dí* is a contraction of *diey*, which has been preserved dialectally,<sup>1</sup> and which shows that vowel-harmony was a late development, not active until after the fracturing of *e*. We may assume *u* < *o* < *u* in *gubia* and *marrubio*; on account of the Portuguese forms, it is not likely that the Spanish words are bookish. *Agüero* stands for earlier \**agoiro* = Port. *agoiro*, and *yegua* corresponds to Port. *égua*.

The Portuguese first-period formations of *i* and *u* agree with *ciñe*, *tiñe*, *uñe*, *cija*, *tiña*, *cuña*. The word *uñe* can be explained in two ways: \**ḡuñge* may have become \**uñge* by dissimilation, in accord with \**kiñla* < \**kingla*, *proa* < *prōra*, or the initial consonant may have been mistaken for the derivative of *illī* found in *gelo* < \**ḡelo* < *illī illu*.

The evidence furnished by Port. *cegonha* and *vergonha* is valid for the Spanish equivalents, as *cigüeña* and *vergüeña* have replaced older forms ending in \*-*oiña* < \*-*oña* with close *o*. The idea of assuming *ō* beside *ō* in *cicōnia*, as some writers have done, is not only groundless but useless: the ending -*ōnia*, found in various geographic names, made Span. \*-*oña*, the *o* becoming close on account of palatal-contact. Close *o* changed to *oi* before *ñ*, and *oi* became *ue* as in *agüero*. Thus early Spanish has *Catalueña*<sup>2</sup> = Catalan *Catalunya*; the Catalan *u* (< *uo*) requires a primitive open *o*, in accordance with *ull* < \**uoλλo* < *oculu* beside *genoll* < \**genuculu*.

Vowels of the second period are seen in *leño*, *seña*, *puño*, *ceño*, *seños*, *uña*, *correa*, *dedo*, *huya*, *huye*, and those of the third period in *vence*, *onza*, *troncho*, *caloña*, \**vergoña* < \**vergoiña* < *vergüeña*. The

<sup>1</sup> Menéndez Pidal, *Gramática histórica española*, Madrid, 1905, p. 222.

<sup>2</sup> Menéndez Pidal, *op. cit.*, p. 22.

group *mñ* lost *m* too late for *o* to become *oi*. The developments of *fugiat* and *uerecundia* show that *ʒy* < *gy* was formed earlier than *ʒy* < *dy*.

## FRENCH EVIDENCE

The formation of *ñ* was comparatively late in French, so that we find third-period vowels in *ceindre*, *joindre*, *teigne*, *coin*, *poin*, as in *veintre*, *once*, *chalonge*, *vergogne*. But the second-period Spanish vowels followed by *y* agree with French *correie*, *deit*, *fuie*, *fuit*.

French has *-oir* < *\*-oiro* (=Port.-*oiro*) < *-ōriu*, but *eür* < *augūriu* against Port. *agoiro*. This shows that Portuguese had *\*agurio* in the second period, and formed *agoiro* < *\*agorio* in the third, whereas the French displacement occurred in the second (or first) period and caused open *u* to become close by palatal-influence. The diphthong then contracted to a simple vowel, before the development of a similar diphthong in *cuir* < *coriū*.

It is customary to call *puiz* < *puteu* irregular, because it seems to disagree with *croiz* < *cruce*. The reason for the difference is to be found in the history of the palatals: *k* had to travel a long distance to reach palatalized *dz* (or *ts* as a final), while *ty* produced this affricate after undergoing only a slight change. Thus *puiz*, instead of being irregular, proves that for French, as for the other Romanic tongues, we must admit a sound-system earlier than the "vulgar" one that confused *ũ* with *ō*. *Croiz* shows a third-period development, like *once*; *puiz* is earlier, just as Span. *puño* is earlier than *onça*.

## PROVENÇAL EVIDENCE

The dialects of southern France generally have vowels corresponding in chronology to those of the north; a notable case is *aür* < *augūriu*. But we also find variants that indicate an approach to the speech of Italy or Spain. Thus in addition to *jonher*, *conh*, and *ponh*, with third-period vowels as in *vergonha*, there are the forms *junher*, *cunh*, and *punh*, implying earlier *ñ*. Likewise *det* has the variant *dit* < *digitu*, with an earlier formation of *y*, so that *u* in the derivatives of *fugit* may represent the second period for some regions and the first for others.

## ITALIAN EVIDENCE

The western Romanic tongues share the principle of vowel-harmony: Port. *fiz*, Span. *hice*, French *fis*, Catalan *fiu* (< \**fiu* < \**fiδ* < \**fidz*) < \**fidzi* < *fēcī*. French *vendenge* and Catalan *venema* are not really exceptions; they show that harmony was a late development, and that in these languages \**vendemia* lost *i* at an early time. But Italian lacks harmonic change: *feci*, *nocqui*, *vendemmia*, *venti*. We may therefore expect to find other peculiar features in Italian. One of these is the closing effect of *η*: *lingua* < *lingua*, *tinca* < *tinca*, but *tronco* < *truncu*. The date of *η*-influence is dependent on the history of *g*.

Simple *y* was developed earlier than *yy*: thus we find a first-period *i* < *ī* in *dito* < *digitu*, but second-period vowels in *correggia*, *fuggia* (whence by analogy *fugga*). The doubling in *fugge* seems to be normal, as in *gregge* < *grege*, *legge* < *lēge*, *legge* < *legit*; apparently *re* comes from *rēx*, not from *rēge*. That is, in the first period *digitu*, *fugit*, *grege*, *lēge*, and *legit* formed *y* < *ʔ* < *g*, while *corrigia* and *fugiat* had *ʔy* < *gy*; in the second period *yy* replaced *ʔy* and the intervocalic *y* of paroxytones. Thus the *u* of *fugge* may be considered a first-period development, historically different from that of *fuggia*.

A first-period formation of *ñ* explains the vowels of *cinge* (*cigne*), *giunge* (*giugne*), *tigna*; the discordant *cogno* seems to be borrowed from some dialect that has *giongere* (a form mentioned by Petronechi) for *giungere*. Vowels of the second period are seen in *legno*, *segno*, *pugno*, and those of the third period in *oncia*, *calogna*, *vergogna*. The difference between *vince* and *oncia* is parallel with that between *tinca* and *tronco*. In the second period the derivative of *lignu* developed *e* and changed *ηn* to *ññ*, while the derivatives of *tinca* and *uincit* had *e* and *ηk*; the *ηk* of \**venket* is attested by *oncia* < *uncia*, which (on account of the second period *u* in *pugno*) must have been \**onkya* until the third period. In the second period \**tenka* changed to *tinka*, and \**venket* to \**vinket*, repeating a development found in Latin.<sup>1</sup> In the third period \**onkya* and \**vinket* were formed; thus the *i* of *vince* is historically different from that of *cinge*. We cannot assume *ñ*-influence in \**vinket*, for *e* is kept in *legno*. And we cannot assume an indirect *i* < *e* (with a second-period *ηg*) in *cinge*, for the

<sup>1</sup> Stolz-Schmalz, *Lateinische Grammatik*, München, 1910, p. 40.

early alteration of *digitu* requires a first-period development of  $\tilde{n}g < \eta g$  in *cingit*. This chronologic difference in the treatment of *k* and *g* agrees with the distinction made in Portuguese (and in Spanish), as stated above; Port. *cinge:tenca:vence* = Span. *ciñe:tenca:vence* = Ital. *cinge:tinca:vince*. The apparent disagreement is due to a secondary formation of  $i < e$  before  $\eta$  in Italian, unknown in the West.

It is not clear whether  $i < \tilde{i}$  was a direct development in *ciglia* < *cilia*. If *Corniglia* < *Cornēlia* is Tuscan, the *i* of *ciglia* could have been an indirect development. But *Corniglia* may be borrowed from one of the southern dialects in which every  $\tilde{e}$  makes *i*. In either case *ciglia* (= Span. *ceja*) might be a direct first-period formation, like *dito* beside Span. *dedo*.

## GENERAL EVIDENCE

In the first period, stressed hiatus-*i* became close; likewise stressed hiatus-*u* before a non-labial vowel. These facts, which are commonly admitted, and the foregoing evidence, which is usually ignored or misinterpreted, show that the Romanic vowels are in general based on those of classic Latin.

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